

Applicant: Allen Carl, et al.
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Amendments to the Claims

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of Claims:

Claims 1-59 (Canceled)

Claims 60-63 (Canceled)

Claims 64-79 (Canceled)

80. (Currently Amended) A method for stabilizing adjacent segments of a mammalian bone, comprising the steps of:

forming a through aperture in each of the adjacent bone segments;

providing an arcuate implant member (a) having a length that is sufficient so the arcuate implant member extends between the two adjacent bone segments, (b) having a cross-section sized so that portions of the arcuate implant member including ends thereof extend through the a preformed aperture that is formed in each of the two adjacent bone segments, and (c) being configured so that the arcuate implant member lies in a plane as it extends between the adjacent bone segments and as the portions thereof extend through the preformed apertures;

implanting the provided arcuate fixation member so that (i) it extends between the adjacent bone segments, and (ii) so that the portions of the arcuate fixation member including ends thereof extend through the preformed apertures in each of the adjacent bone segments; and

wherein the apertures formed in each of the two bone segments define an arcuate path in the plane and wherein the provided arcuate implant member is further configured so as to correspond to the arcuate path defined by the apertures.

81. (Previously Presented) The method of claim 80, further comprising the step of localizing opposing portions of the adjacent bone segments proximal to each other before said step of implanting.

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82. (Currently Amended) The method of claim 80 wherein the preformed apertures are
~~has been drilled~~ in each of the adjacent bone segments.

Claims 83-84 (Canceled)

85. (Currently Amended) The method of claim 80 wherein the preformed through
apertures in each of the adjacent bone segments are formed so as to have a common axis of
rotation.

86. (Currently Amended) The method of claim 85 wherein the preformed through
apertures in each of the adjacent bone segments are formed in the respective bone segment by
one of drilling or ablation of the bone by an energy source.

87. (Currently Amended) A method for stabilizing adjacent segments of a mammalian
bone, comprising the steps of:

forming an arcuate through aperture in each of the adjacent bone segments; segments,
~~where at least one of the apertures is a through aperture;~~

implanting an arcuate fixation member so that it extends in a plane between the adjacent
bone segments and so portions of the arcuate fixation member including ends thereof extend
through the preformed aperture in each of the adjacent bone segments and so the arcuate fixation
member lies in a plane as it extends between the adjacent vertebrae and as the portions thereof
extend through the preformed apertures; and

wherein the step of forming includes forming the through an aperture ~~in at least one of the~~
~~adjacent bone segments~~ by one of drilling or ablation of the bone by an energy source.

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88. (Previously Presented) A method for stabilizing adjacent segments of a mammalian bone, comprising the steps of:

forming a through aperture in each of the adjacent bone segments;

wherein the step of forming includes drilling the through aperture in each of the adjacent bone segments so as to create intersecting apertures with convergent paths; and

implanting an arcuate fixation member so that it extends in a plane between the adjacent bone segments and so portions of the arcuate fixation member including ends thereof extend through the preformed through aperture in each of the adjacent bone segments and so the arcuate fixation member lies in a plane as it extends between the adjacent vertebrae and as the portions thereof extend through the preformed through apertures.

89. (Currently Amended) The method of claim 80, wherein the step of implanting includes successively moving one of the portions of the arcuate fixation member through the preformed through aperture in one adjacent bone segment and into the preformed through aperture of the other adjacent bone segment.

90. (Currently Amended) The method of claim 80 wherein the arcuate fixation member is made from one or more of a metal, bone, morphogenic protein including a combination of bone and bone morphogenic protein, carbon fiber composite, nitinol, or a biodegradable material including polyactic acid, polyglycolic acids, copolymers and derivatives thereof, collagen, collagen coated metal and collagen coated bone..

Claims 91-100 (Canceled)

Claims 101-104 (Canceled)

105. (New) The method of claim 88, further comprising the step of localizing opposing portions of the adjacent bone segments proximal to each other before said step of implanting.

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106. (New) The method of claim 88 wherein the through apertures in each of the adjacent bone segments are formed so as to have a common axis of rotation.

107. (New) The method of claim 88, wherein the step of implanting includes successively moving one of the portions of the arcuate fixation member through the through aperture in one adjacent bone segment and into the through aperture of the other adjacent bone segment.

108. (New) The method of claim 88 wherein the arcuate fixation member is made from one or more of a metal, bone, morphogenic protein including a combination of bone and bone morphogenic protein, carbon fiber composite, nitinol, a biodegradable material including polyactic acid, polyglycolic acids, copolymers and derivatives thereof, collagen, collagen coated metal and collagen coated bone..

109. (New) The method of claim 88 wherein the arcuate fixation member is formed in-situ using a polymer-based system, where the through apertures act as a mold for forming the arcuate fixation member.

110. (New) The method of claim 80 wherein the arcuate fixation member is formed in-situ using a polymer-based system, where the through apertures act as a mold for forming the arcuate fixation member.